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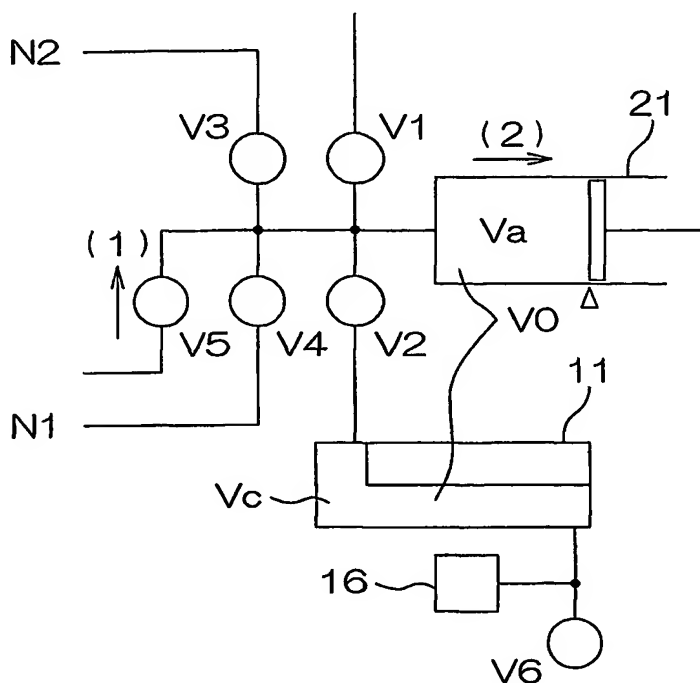
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(54) Title: GAS INJECTION AMOUNT DETERMINING METHOD IN ISOTOPE GAS ANALYSIS, AND ISOTOPE GAS ANALYZING AND MEASURING METHOD AND APPARATUS



(57) Abstract: As previous processing of measurement in which gas to be measured containing, as gas components, carbon dioxide $^{13}\text{CO}_2$ and carbon dioxide $^{12}\text{CO}_2$, is introduced into a cell, and in which the intensities of transmitted lights having wavelengths suitable for measurement of the respective gas components, are measured and then data-processed to measure the concentrations of the gas components, the air having a predetermined volume V_a is sucked by a gas injection device 21, a gas exhaust valve V_6 of a cell 11 is closed and the air stored in the gas injection device 21 is transferred to the cell 11 filled with the air at an atmospheric pressure, thereby to pressurize the cell inside. The pressure thus pressurized is measured as P . The cell volume V_c is subtracted from the product obtained by multiplying the sum. VO of the volume V_a and the cell volume V_c , by the ratio PO/P in which PO is the target pressure of the gas to be measured at which a calibration curve has been prepared for an isotope gas analysis and measurement, thus determining the one-time gas injection amount of the gas injection device 21. Thus, measured concentration variations based on changes in atmospheric pressure can be corrected.



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